The answer along with explanations are given at the end of the question paper

Section: Quantitative Aptitude

Question No.1

A cubic meter of copper weighing 1500 kilograms is rolled into a square bar 4 meters long. An exact cube is cut off from the bar. How much does it weigh?

1. 185.5 kg
2. 187.5 kg
3. 197.5 kg
4. 187.5 kg

Question No.2

If the incentre of an equilateral triangle lies inside the triangle and its radius is 8 cm, then the side of the equilateral triangle is

1. $16\sqrt{3}$ cm
2. $14\sqrt{3}$ cm
3. $32\sqrt{3}$ cm
4. none of these

Question No.3

6 + 6.66 + 66.6 + 6.06 + 666 = ?

1. 761.32
2. 751.32
3. 741.32
4. 731.32

Question No.4

Find the maximum value of 8cos + 15sin ?

1. 18
2. 19
3. 17
4. 20

Question No.5

In a company each of the employees contributed as many rupees as there are number of employees. If the total collection was 302500 paise, what is the number of employees in the company?

1. 56
2. 54
3. 55
4. **56**

Question No.6

If P = 34 × 28 × 52, Q = 62 × 7 × 2, then find the number of factors of the number N which is common with P & Q.

1. 5
2. 15
3. 8
4. 12

Question No.7

If ab + bc + ca = 0

Find the value of 1/(a^2-bc) + 1/(b^2-ca) + 1/(c^2-ab)

1. 2
2. -1
3. 0
4. 1

Question No.8

A circular grass lawn of 14 metres in radius has a path 7 metres wide running around it on the outside. Find the area of the path.

1. 386 m²
2. 770 m²
3. 464 m²
4. 694 m²

Question No.9

8 years ago, the average age of a family of 8 members was 28 years. A baby being born, the average age of the family is 32.5 years. The present age of the baby is:

1. 5 years
2. 3 years
3. 4.5 years
4. 3.5 years

Question No.10

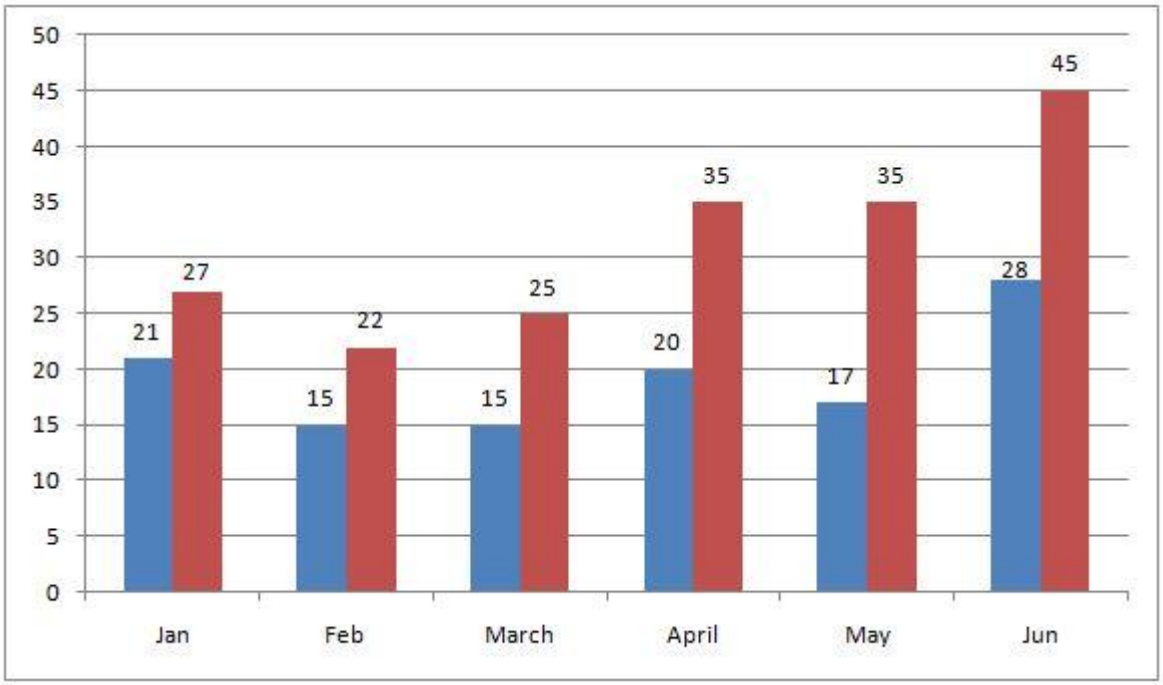
A tank is in the form of a hemi-spherical bowl on which is mounted a hollow cylinder. The diameter of the sphere is 7 cm and the total height of vessel is 15.5 cm, find the capacity of the tank.

1. 550.83 cu cm
2. 551.83 cu cm
3. 541.83 cu cm
4. 551.53 cu cm

Question No.11

The data given shows the registration of cars and total vehicles (in thousands) for six months in 2018 in city X.

Note: In the chart, the first number represents car and the second number represents total vehicles.



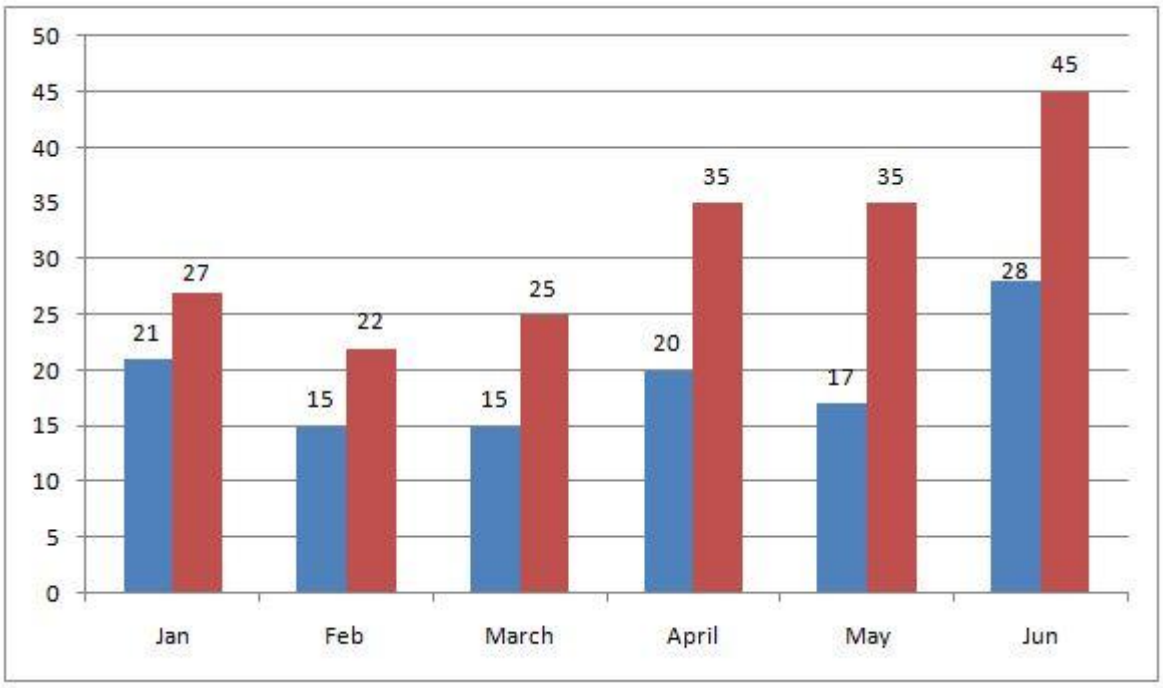
The percentage increase (upto two decimal places) in the registration of total vehicles from February 2018 to May 2018?

1. 58.09%
2. 59.10%
3. 59.09%
4. 59.29%

Question No.12

The data given shows the registration of cars and total vehicles (in thousands) for six months in 2018 in city X.

Note: In the chart, the first number represents car and the second number represents total vehicles.



What is the average numbers of car registered in the month of January, April and June 2018?

1. 22 thousand
2. 20 thousand
3. 23 thousand
4. 24 thousand

Question No.13

A drum of petrol is 4/5 full. When 15 liters of oil is drawn from it, it is 3/10 full. What is the capacity of the drum?

1. 20
2. 30
3. 25
4. 35

Question No.14

If a copper wire is bend to make a square whose area is 729 cm2. If the same wire is bent to form a semicircle, then find the radius of semicircle?

1. 31 cm
2. 21 cm
3. 11 cm
4. 22 cm

Question No.15

In a triangle PQR, ∠ PRQ = 90 ° and RS is perpendicular to PQ. If RS = 12 cm and PS = 8 cm, then the length of PQ is

1. 9.75 cm
2. 19.75 cm
3. 10.75 cm
4. 10.85 cm

Question No.16

Purvi got 15% of the maximum marks in an examination and failed by 61 marks. In the same examination Kiran got 34% of the total marks which is 15 marks more than the passing marks. What were the passing marks in the examination?

1. 100
2. 121
3. 125
4. 135

Question No.17

The difference between 12/25 of a number and 40% of the number is 60. What is 72% of the number?

1. 565
2. 540
3. 470
4. 468

Question No.18

The CP of 48 bookmarks is equal to SP of 40 bookmarks. Find the gain percent.

1. 30%
2. 22.5%
3. 20%
4. 24%

Question No.19

Chetan sells an article at a profit of 22%. Had he bought it for 16% less and sold it for Rs. 340 less, he would have gained 25%. What is the cost price of the article?

1. Rs. 4000
2. Rs. 3000
3. Rs. 2000
4. Rs. 1500

Question No.20

At present Ashish age is 5times Garima's age and of Aanchal's age. After 9 years Ashish will be 2 times Garima's age. What is Ashish's present age?

1. 15 years
2. 11 years
3. 12 years
4. 16 years

Question No.21

In Δ XYZ, PQ is parallel to YZ. If XP : PY = 1 : 2 and XQ = 3 cm; XZ is equal to –

1. 5 cm
2. 6 cm
3. 10 cm
4. 9 cm

Question No.22

If cos 9π/3 = x, then the value of x is

1. 1
2. -1
3. 0
4. 1/2

Question No.23

Mrs. Chauhan earns Rs 57750 per month. She spends on house hold items and on rest of the things. The amount she saves is:

1. Rs 15500
2. Rs 16000
3. Rs 15000
4. Rs 16500

Question No.24

$\sqrt{1.7424} = ?$

1. 1.38
2. 1.42
3. 1.32
4. 1.48

Question No.25

Directions

What will come in place of question mark (?) in the following question?

68% of 14500 + 382 + (41 × 52) ÷ 2.6 =? - 70% of 7250

1. 17199
2. 17228
3. 16416
4. **17814**

Question No.26

A sum of money is divided in the ratio of 2:3. If the smaller part is 94. Find the larger part.

1. 150
2. 141
3. 120
4. 100

Question No.27

A sum becomes 5 times in 8 year at a certain rate of interest. Find the time in which the same amount will be 17 times at the same rate of interest?

1. 24 year
2. 28 year
3. 45 year
4. 32 year

Question No.28

The average speed of a bus is 1/6 the speed of an aeroplane. The aeroplane covers 3600 km in 4 hours. How much distance will the bus cover in 42 minutes?

1. 150 km
2. 105 km
3. 140 km
4. 120 km

Question No.29

A, B and C can do a piece of work in 12, 15 and 20 days respectively. In how many days can A do the work if he is assisted by B and C on every fourth day?

1. 46/5 days
2. 109/13 days
3. 35/12 days
4. 105/12 days

Question No.30

Directions

What will come in place of question mark (?) in the following question?

(60 × 64) ÷ 3.2 + 50% of 6270 + ? = (18 × 30) ÷ 1.5 + 30% of 5000

1. - 2987
2. - 2950
3. - 2475
4. - 2822

Section: Reasoning

Question No.31

In each of the following questions, select the related letter/word/number from the given alternatives.

284 : 2 : : 296 : ?

1. 3
2. 4
3. 5
4. 6

Question No.32

MANDI : OXPAK : : SIRSA : ?

1. UGTPC
2. UFUPC
3. UFTPC
4. UFTQC

Question No.33

Rain: Patter : : Door: ?

1. Flight
2. Bang
3. Graze
4. Walk

Question No.34

If × stands for 'addition', ÷ stands for 'subtraction', + stands for 'multiplication' and - stands for 'division', then 40 × 12 ÷ 28 - 7 + 12 =?

1. 2
2. 3
3. 4
4. 5

Question No.35

Choose Odd One out.

1. Atlantic
2. Indian
3. Pacific
4. Africa

Question No.36

Choose Odd One out.

1. Asia
2. Africa
3. America
4. Europe

Question No.37

Which word comes first in the dictionary?

1. yamuna
2. yahoo
3. youtube
4. yamaha

Question No.38

In a certain coded language FROZEN is coded as EQPYFM and DENIED is coded as CFMJFC, then what is the code of JUMBLE?

1. IVNAKF
2. IVLAKF
3. IVLCKF
4. IVLAMF

Question No.39

P, Q, R, S and T are sitting around a circular table, facing the centre, but not necessarily in the same order. R, who sits third to the right of T, is on the immediate left of Q and second to the right of P. Who sits exactly between S and T?

1. P
2. S
3. T
4. Q

Question No.40

Directions

In each of the questions below are given four statements followed by four conclusions numbered I, II and III and IV. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of given conclusions logically follows from the given statements disregarding commonly known facts.

Statements: Some kites are sticks.

All strings are kites.

No paper is a kite.

Some clouds are kites.

Conclusions: I. Some sticks are papers.

II. Some sticks are not papers.

III. Some strings are not papers.

IV. Some papers are not clouds.

1. Either I or II and III follow
2. Only II and III follow
3. Only II follows
4. Only III follows

Question No.41

Directions

In each question below a statement is given followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

Statement: “My KASSIA” mobile app has been launched by of KASSIA (Karnataka Small Scale Industries Association) to help in faster dissemination of information among entrepreneurs.

Assumption I: This mobile App been launched specifically for Members of KASSIA (Karnataka Small Scale Industries Association)

Assumption II: KASSIA (Karnataka Small Scale Industries Association) has been known to be very prompt and fast in helping its members.

1. Only I implicit.
2. Only II implicit.
3. Both I and II implicit.
4. Neither I nor II implicit.

Question No.42

Directions

In each question below a statement is given followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

Statement: Automobile majors began the new fiscal on a strong note, posting high double-digit growth in their domestic passenger vehicle sales.

I . The companies with new launches did particularly well.

II. The production capacity has been increased by the automobile manufacturers.

1. if only I implicit.
2. if only II implicit.
3. if either I or II implicit.
4. if neither I nor II implicit.

Question No.43

B is father of P and Q. Y is mother of L, O is son of P. O is the only brother of L. Y is daughter-in-law of A. A has only one daughter and one son. Which of the following needs to be true to establish that L is daughter of Y?

1. Q is unmarried
2. Y has only one son
3. O is grandson of B
4. None of these

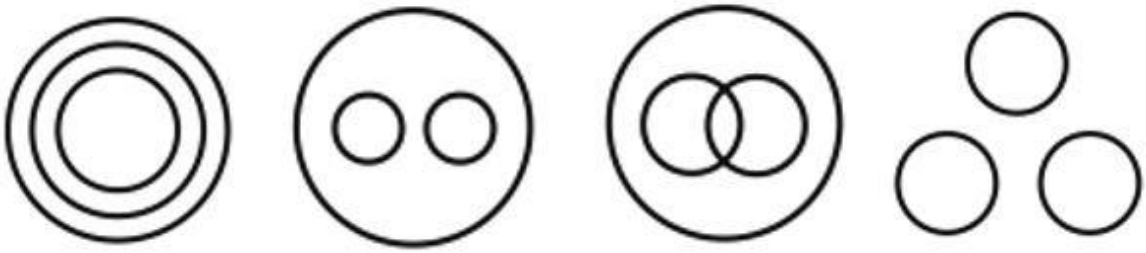
Question No.44

Naresh walked 40 m towards north then turned left and walked 52 m. He then turned to south and walked 20 m then he took a left turn and walked 32 m. After that he turned right and walked 14 m and finally he turned left to and walked 28 m. What is shortest distance between starting and end point and in which direction is Naresh from the starting point?

1. 10 m, Northeast
2. 15 m, Northwest
3. 17 m, Southwest
4. 18 m, Northeast

Question No.45

Which of the following diagrams best depicts the relationship among Shirt, Sweater and Clothes?



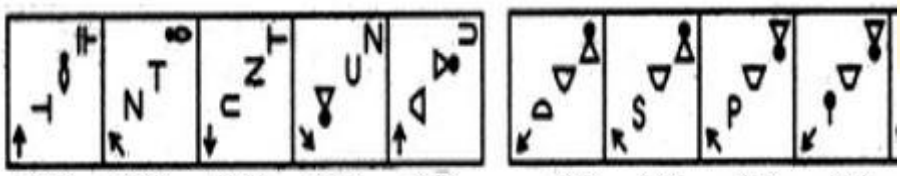
1 2 3 4

1. 1
2. 2
3. 3
4. 4

Question No.46

Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures: Answer Figures:

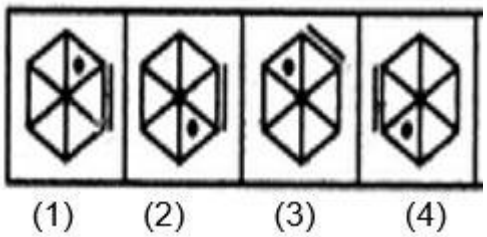


(A) (B) (C) (D) (E) (1) (2) (3) (4)

1. 1
2. 2
3. 3
4. 4

Question No.47

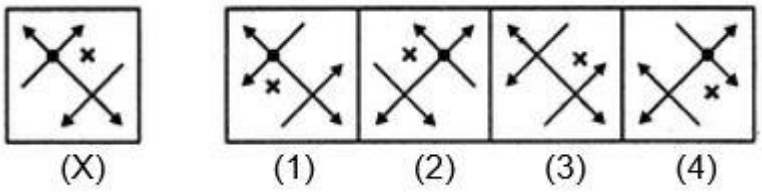
Choose the figure which is different from the rest.



1. 1
2. 2
3. 3
4. 4

Question No.48

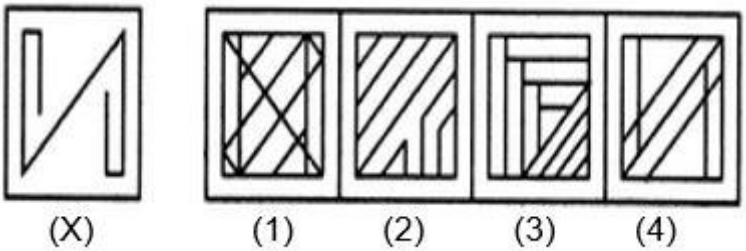
Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



1. 1
2. 2
3. 3
4. 4

Question No.49

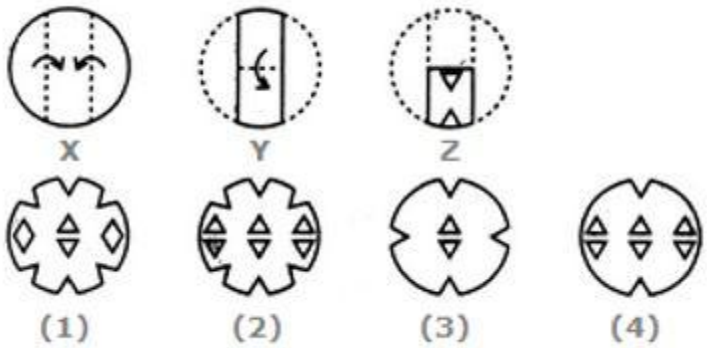
Find out the alternative figure which contains figure (X) as its part.



1. 1
2. 2
3. 3
4. 4

Question No.50

Choose a figure which would most closely resemble the unfolded form of Figure (Z).

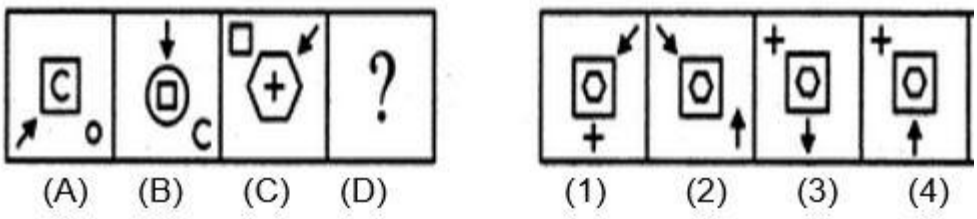


1. 1
2. 2
3. 3
4. 4

Question No.51

Select a suitable figure from the Answer Figures that would replace the question mark (?).

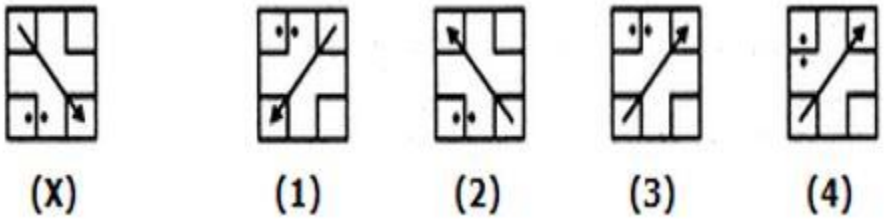
Problem Figures: Answer Figures:



1. 1
2. 2
3. 3
4. 4

Question No.52

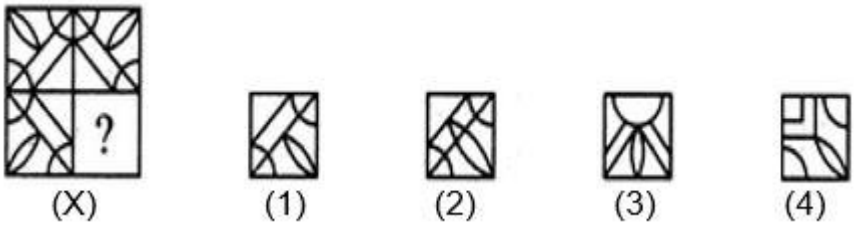
Choose the correct water image of the given figure (X) from amongst the four alternatives.



1. 1
2. 2
3. 3
4. 4

Question No.53

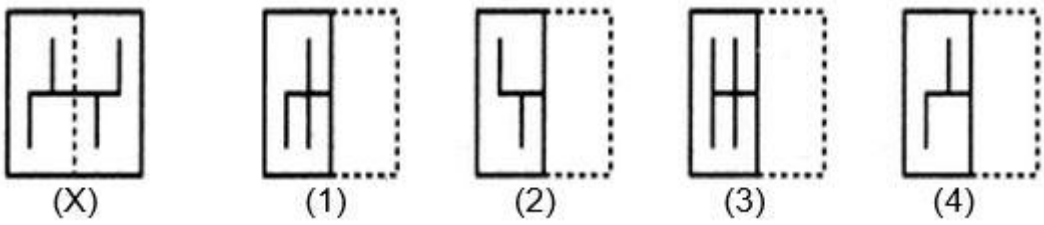
Identify the figure that completes the pattern.



1. 1
2. 2
3. 3
4. 4

Question No.54

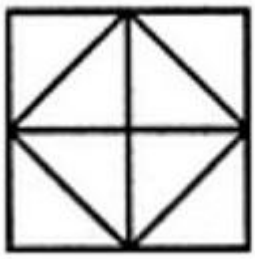
Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



1. 1
2. 2
3. 3
4. 4

Question No.55

Count the number of convex pentagons in the adjoining figure.



1. 16
2. 12
3. 8
4. 4

Section: General Awareness

Question No.56

The 9th meeting of India-ROK Joint Commission (ROK/ South Korea) was held in

1. New Delhi
2. Mumbai
3. Hyderabad
4. Gujarat

Question No.57

Which state government's Legislative Assembly has unanimously passed a resolution for seeking 33% reservation for women in Parliament and State legislative assembly in December 2018?

1. Chhattisgarh
2. Haryana
3. Punjab
4. Uttarakhand

Question No.58

The Reserve Bank of India(RBI) Governor Shaktikanta Das is the _____ Governor of RBI.

1. 36th
2. 24th
3. 23rd
4. **25th**

Question No.59

Which city is known as "Basket of Eggs" ?

1. Tamil Nadu
2. Andhra Pradesh
3. Goa
4. Jharkhand

Question No.60

What is the tenure of Chief Election Commissioner ?

1. 3 year
2. 5 year
3. 6 year
4. 4 year

Question No.61

By which name was Mahabharata got translated into Persian language ?

1. Ramayana
2. Razmnama
3. Rajatarangini
4. None of these

Question No.62

The book "The story of my life" is written by

1. Sardar Vallabhbhai Patel
2. Madan Mohan Malwia
3. Morarji Desai
4. P. V. Narsimha Rao

Question No.63

Who of the following has been selected for 2018 Jnanapith Award ?

1. Anita Desai
2. Amitav Ghosh
3. Arundhati Roy
4. Salman Rushdie

Question No.64

Which among the following rivers flow in Assam ?

1. Manas
2. Ganga
3. Sutlej
4. Ravi

Question No.65

Good Governance day is observed every year on _____.

1. November 25
2. November 26
3. December 25
4. December 26

Question No.66

Who has been named People for the Ethical Treatment of Animals (PETA) India's Person of the Year for 2018 ?

1. Sonam Kapoor
2. Deepika Padukone
3. Priyanka Copra
4. Anushka Sharma

Question No.67

From which of the following countries Greenwich line does not pass?

1. Burkina Faso
2. France
3. United Kingdom
4. Iran

Question No.68

Catriona Elisa Gray has been crowned the 67th Miss Universe 2018. She belongs to which country ?

1. Argentina
2. Thailand
3. Mexico
4. Philippines

Question No.69

What is the total number of players in Kho - Kho?

1. 10
2. 12
3. 11
4. 9

Question No.70

Wankhede Stadium is situated in which state?

1. Bengaluru
2. Mumbai
3. Chennai
4. New Delhi

Question No.71

Name the instrument that is used to record physical happenings at a distant place.

1. Tonometer
2. Transponder
3. Vernier calliper
4. Telemeter

Question No.72

Atomic number is the number equal to

1. Electrons
2. Neutrons
3. Protons
4. None of these

Question No.73

Which among the following elements is present in Insulin?

1. Zinc
2. Potassium
3. Magnesium
4. Cobalt

Question No.74

Which hormone controls blood, calcium and phosphate in human body ?

1. Oxytocin
2. Calcitonin
3. Parathyroid
4. Glucagon

Question No.75

Water gas is a mixture of two gases Hydrogen and _____.

1. Carbon dioxide
2. Water
3. Oxygen
4. Carbon Mono -oxide

Question No.76

Which chemical element is used to make bread ?

1. Sodium Bicarbonate
2. Magnesium Carbonate
3. Aluminium Chloride
4. Potassium Sulfate

Question No.77

When Chloroform came into contact with air and light it produces the poisonous gas named _____.

1. Carbon monoxide
2. Phosgene
3. Hydrogen azide
4. Nitrogen dioxide

Question No.78

What is the chemical name of Pearl Ash ?

1. Magnesium Sulphate
2. Sodium Carbonate
3. Sodium Chloride
4. Potassium Carbonate

Question No.79

Name the first organic compound that was prepared in laboratary?

1. Methane
2. Ammonium cyanate
3. Ethyl Alcohol
4. Urea

Question No.80

Due to different _____ , Flute and Sitar sounds different even playing the same note.

1. Densities
2. Intensities
3. Frequencies
4. None of these

Question No.81

Of which chemical elements most compounds are found ?

1. Oxygen
2. Carbon
3. Nitrogen
4. Hydrogen

Question No.82

Which among the following enzyme is found in Human Saliva?

1. Pepsin
2. Ptyalin
3. Renin
4. Trypsin

Question No.83

The photoreceptor cells of the eye are located in the __?

1. Retina
2. Sclera
3. Choroid
4. Macula

Question No.84

Which element is known as "fuel of future"?

1. Carbon dioxide
2. Nitrogen
3. Neon
4. Hydrogen

Question No.85

Which gas is used in yellow lights used in streets or roads?

1. Helium
2. Sodium
3. Neon
4. Argon

Question No.86

Which is the logarithmic unit that is used to measure the sound intensity?

1. Ampere
2. Mole
3. Decibels
4. None of these

Question No.87

Blood group ‘O-’ is called as the _____.

1. Universal Recipient
2. Both 1 and 3
3. Universal Donor
4. None of these

Question No.88

Which of the following gland secretes milk secretion hormone oxytocin?

1. Thymus gland
2. Pituitary gland
3. Adrenal gland
4. Pineal gland

Question No.89

By whom first heart transplant was done in AIIMS in india ?

1. Dr. Brahmachari
2. Dr. Bidhan Chandra Roy
3. Dr. A. G. K. Gokhale
4. Dr. P. Venugopal

Question No.90

At what temperature the volume of water is minimum ?

1. 4 degree Celcius
2. 12 degree Celcius
3. 0 degree Celcius
4. - 4 degree Celcius

Question No.91

DNA is found in which other part besides nucleus ?

1. Adenine
2. Chromosome
3. Mitochondria
4. None of these

Question No.92

A lens is made of which among the following glass ?

1. Absinthe glass
2. Flint glass
3. Polarised glasses
4. None of these

Question No.93

Water Turbine was invented by _____ .

1. Benjamin Franklin
2. Benoit Fourneyron
3. Daniel Halladay
4. None of these

Question No.94

At what temperature a body will not radiate any heat energy ?

1. 230 degree celcius
2. - 273 degree celcius
3. 0 degree celcius
4. 120 degree celcius

Question No.95

If a red light is seen in green light, it appears to be of which of the following colour ?

1. Green - red
2. Black
3. Black - Green
4. Violet

Question No.96

What is the number of hydrogen bonds per water molecule in an ice ?

1. 4
2. 5
3. 3
4. 6

Question No.97

Which of the following element has the highest electronegativity value ?

1. Phosphorus
2. Francium
3. Fluorine
4. Nitrogen

Question No.98

Colloids can be purified by _____.

1. Evaporation
2. Dialysis
3. Condensation
4. Precipitation

Question No.99

Entamoeba Histolytica is a

1. Protozoa
2. Virus
3. Bacteria
4. Fungus

Question No.100

Which one is the largest artery in the human body ?

1. Brachial
2. Aorta
3. Axillary
4. Ulnar

Answers & Explanations

Question no. 1 Answer Option A

If the original length of cubic meter is 1 m

Then we will use this formula:

let volume of initial solid = V and length of the solid = L

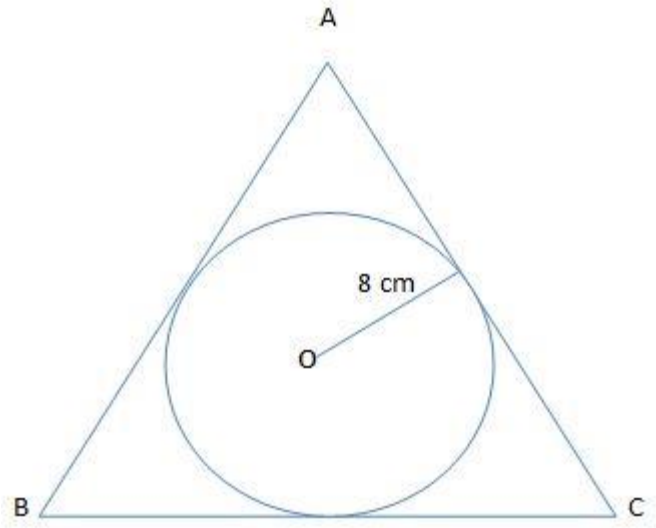
Volume of cube cut off = $\left(\sqrt{\frac{V}{L}}\right)^3$

Volume of cube cut off = $\left(\sqrt{\frac{1}{4}}\right)^3$

Volume of cube cut off = $\frac{1}{8}$

Weight = $\frac{1500}{8}$ = 187.5 kg

Question no. 2 Answer Option A



Inradius of an equilateral triangle with side a = $\frac{a\sqrt{3}}{6}$

As per the given problem,

$\frac{a\sqrt{3}}{6}$ = 8

$a\sqrt{3}$ = 48

a = $\frac{48}{\sqrt{3}}$

a = $\frac{48\times\sqrt{3}}{3}$

a = 16√3 cm

Question no. 3 Answer Option B

6 + 6.66 + 66.6 + 6.06 + 666 = 751.32

Question no. 4 Answer Option C

Maximum value of

$m.\sin\theta \pm n.\cos\theta = \sqrt{m^2+n^2}$

∴ from question = $\sqrt{8^2+15^2}$ = $\sqrt{289}$ = 17

Question no. 5 Answer Option C

Let the number of employees in the company be x.

Now each of these employees contributed 'x' rupees each. So the total collection will be x^2 rupees. Now the total collection is given to be 302500 paise, which is 3025 rupees. As per the statement of the question

x^2 = 3025 ⇒ x = 55.

Thus there are 55 students.

Question no. 6 Answer Option D

If P = $3^4 \times 2^8 \times 5^2$, Q = $6^2 \times 7 \times 2 = 2^2 \times 3^2 \times 7 \times 2 = 2^3 \times 3^2 \times 7$

then N= HCF (P, Q) = $2^3 \times 3^2$

So Number of factors of N= (3+1) (2+1) = 12

Question no. 7 Answer Option C

ab + bc + ca = 0

bc = - ab – ca ca = - ab – bc ab = -bc –ca

Now, 1/(a^2-bc) + 1/(b^2-ca) + 1/(c^2-ab)

= 1/(a^2-(-ab-ca)) + 1/(b^2-(-ab-bc)) + 1/(c^2-(-bc-ca))

=1/(a^2+ab+ca) + 1/(b^2+ab+bc) + 1/(c^2+bc+ca)

= 1/(a(a+b+c)) + 1/(b(a+b+c)) + 1/(c(a+b+c))

= (bc+ca+ab)/(abc(a+b+c)) = 0/(abc(a+b+c)) = 0

Question no. 8 Answer Option B

Area of the lawn= $\pi r^2 = \frac{22}{7}$ x 14 x 14 = 616 m²

Area of the lawn including path= $\pi r^2 = \frac{22}{7}$ x 21 x 21 = 1386 m²

Area of the path = 1386 m² - 616 m² = 770 m²

Question no. 9 Answer Option C

Total age of 8 members now = (28 × 8 + 8 × 8) years = 288 years.
Total age of 9 members now = (32.5 × 9) years = 292.5 years.
Age of the baby = (292.5 - 288) years = 4.5 years.

Question no. 10 Answer Option B

Diameter is 7, so radius is 3.5 cm

Total height = 15.5 cm, so height of cylinder = 15.5- 3.5 = 12 cm (because height of hemisphere is same as its radius)

Capacity of tank = volume of cylinder + volume of hemisphere

So = $\pi r^2 h + \frac{2}{3} \pi r^3 = \frac{22}{7} \times 3.5 \times 3.5 \times 12 + \frac{2}{3} \times 22/7 \times 3.5 \times 3.5 \times 3.5 = 462 + 89.83 = 551.83$ cm^3

Question no. 11 Answer Option C

Required percentage = $\frac{35000-22000}{22000} \times 100 = \frac{13000}{22000} \times 100$ = 59.09%

Question no. 12 Answer Option C

Required average = $\frac{21+20+28}{3} = \frac{69}{3}$ = 23 thousand

Question no. 13 Answer Option B

Let the capacity of drum be x

then 4x/5 - 15 = 3x/10

=> 4x/5 - 3x/10 = 15

=> 5x/10 = 15

=> x = 30

Question no. 14 Answer Option B

Area of square= 729,

hence side =27

Perimeter = 4a =4*27 = 108

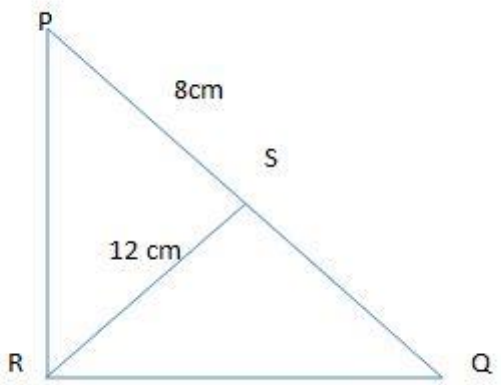
Circumference of semicircle= Π r + 2r

22/7 * r + 2r = 108

r(36/7)=108

r = 21cm

Question no. 15 Answer Option C



Triangles PRQ, RSQ and RSP are right angled triangles.

By Pythagoras theorem,

$PQ^2 = QR^2 + PR^2$

$\Rightarrow (QS + PS)^2 = (RS^2 + QS^2) + (RS^2 + PS^2)$

$\Rightarrow (8 + QS)^2 = 12^2 + 8^2 + 12^2 + QS^2$ $(\because (a + b)^2 = a^2 + 2ab + b^2)$

$\Rightarrow 64 + 128QS + QS^2 = 144 + 64 + 144 + QS^2$

$\Rightarrow 128QS = 352$

$\Rightarrow QS = 352/128 = 2.75$ cm

PQ = QS + SP = 2.75 + 8 = 10.75 cm

∴ PQ = 10.75 cm

Question no. 16 Answer Option B

Let x is the maximum marks of the examination.

Given that Purvi failed by 61 marks

⇒Minimum Pass Mark = 15x/100 + 61.....(Equation 1)

Given that Kiran got 15 marks more than the passing marks

⇒Minimum Pass Mark = 34x/100 −15.....(Equation 2)

From equations 1 and 2, we have

=> 15x/100 + 61 = 34x/100 − 15

⇒19x/100 = 76

⇒ x = 100 × 76/19 = 400

⇒Maximum marks of the examination = x = 400

Minimum Pass Mark = 15 × 400/100 + 61 = 60 + 61 = 121

Question no. 17 Answer Option B

Let the number be x.

Then, x × 12/25 – 40% of x = 60

=> 12x/25 – 40x/100 = 60

=> 48x – 40x = 60 × 100

=> 8x = 6000

∴ x = 750

∴ 72% of 750 = 750 × 72/100= 540

Question no. 18 Answer Option C

Let the CP of each bookmark be Rs. 1

Then, CP of 40 bookmarks = Rs. 40, SP of 40 bookmarks = Rs. 48

Gain% = (8 x 100)/40 = 20%

Question no. 19 Answer Option C

Let the CP be Rs. 100 and SP be Rs. 122

Now, new CP = Rs. 84 and new SP = 84 × 125/100 = Rs. 105

Difference = 122 – 105 = Rs.17

At, Rs. 17 = Rs. 340

so 1 =20

therefore cp = 20 × 100 = 2000 rs

Question no. 20 Answer Option A

Garima's present age = x

Ashish's present age = 5x

Aanchal's present age = 2x

After 9 years:

Ashish's age = 2*Garima's age

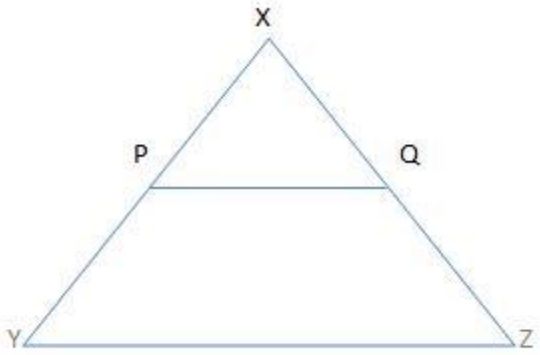
5x+9 = 2(x+9)

=>3x = 18-9

=> x=9/3 = 3

So, Ashish's present age = 5x = 5*3 = 15 years

Question no. 21 Answer Option D



PQ is parallel to YZ.

In Δ XYZ

By properties of parallel lines-

If a line drawn parallel to a side and it passes through other 2 sides of triangle then it divides both sides in equal proportion.

∴ XP/PY = XQ/QZ

$$\frac{1}{2} = \frac{3}{QZ}$$

⇒ QZ = 6 cm

∵ XZ = XQ + QZ

⇒ XZ = 3 + 6

⇒ XZ = 9 cm

Question no. 22 Answer Option C

According to the given information,

x = cos 9π/3

⇒ x = cos (2π – 3π/6)

(Third Quadrant)

⇒ x = -cos(3π/6)

∴ x = 0

Question no. 23 Answer Option C

Her total expenditure = $\frac{5}{11}+\frac{2}{7}=\frac{35+22}{77}=\frac{57}{77}$.

Her savings = 1 - $\frac{57}{77}=\frac{20}{77}$.

:. her saving in rupees = $\frac{20}{77}\times 57750$ = 15000

Question no. 24 Answer Option C

$\sqrt{\frac{17424}{10000}}=\frac{132}{100}$ = 1.32

Question no. 25 Answer Option A

68% of 14500 + 38^2 + (41 × 52) ÷ 2.6 =? - 70% of 7250

9860 + 1444 + 820 =? - 5075

? = 17199

Question no. 26 Answer Option B

Let the smaller and larger part be 2x and 3x.
Smaller part = 2x = 94 ⇒ x= 47
Larger part = 3x = 3 × 47 = 141

Question no. 27 Answer Option D

T=8, SI = 5P-P =4P

4P = P ✕R ✕8/100

R = 50%

For another time

SI = 17P-P =16P

16P = P ✕50 ✕T/100

T = 32 year

Alternate Solution:

5 times in = 8 years

17 times will become in = 8 ✕ (17-1)/(5-1) = 8 ✕ 16/4 **=32 years**

Question no. 28 Answer Option B

Distance covered by aeroplane = 3600 km, Time= 4 hrs.

Speed of the aeroplane = 3600/4 = 900 km/hr

Average speed of a bus = 1/6 * 900 = 150 km/hr

Time= 42 minutes = 42/60 = 7/10 hrs

Distance covered by bus = Speed x Time

= 150 * 7/10 = 105 km

Question no. 29 Answer Option A

Let total work = LCM of 12, 15 and 20 = 60 units

A's 1 day work = 5 units, B's 1 day work = 4 units & C's 1 day work = 3 units

Total work completed in 4 days = 5+5+5+(5+4+3) = 27 units

So total work completed in 8 days = 54 units

Total work in 9 days = 54 + 5 = 59 unit

Rest 1 unit is completed by A in = 1/5 days

So total work completed in = 9 +(1/5) = 46/5 days.

Question no. 30 Answer Option C

(60 × 64) ÷ 3.2 + 50% of 6270 + ? = (18 × 30) ÷ 1.5 + 30% of 5000

1200 + 3135 + ? = 360 + 1500

4335 + ? = 1860

? = - 2475

Question no. 31 Answer Option B

284 ⇒ (4^2)/8 ⇒ = 2

296 ⇒ (6^2)/9 ⇒ = 4

Question no. 32 Answer Option C

M + 2 = 0

A - 3 = X

N + 2 = P

D - 3 = A

I + 2 = K

SIMILARLY.

S + 2 = U

I - 3 = F

R + 2 = T

S - 3 = P

A + 2 = C

Question no. 33 Answer Option B

Patter is the sound made by falling rain. Similarly, bang is the sound made by a closing door.

Question no. 34 Answer Option C

40 × 12 ÷ 28 - 7 + 12 = ?

40 + 12 - 28 ÷ 7 × 12

40 + 12 - 4 × 12

40 + 12 - 48 = 4

Question no. 35 Answer Option D

All except Africa are oceans.

Question no. 36 Answer Option C

All except America are continent.

Question no. 37 Answer Option B

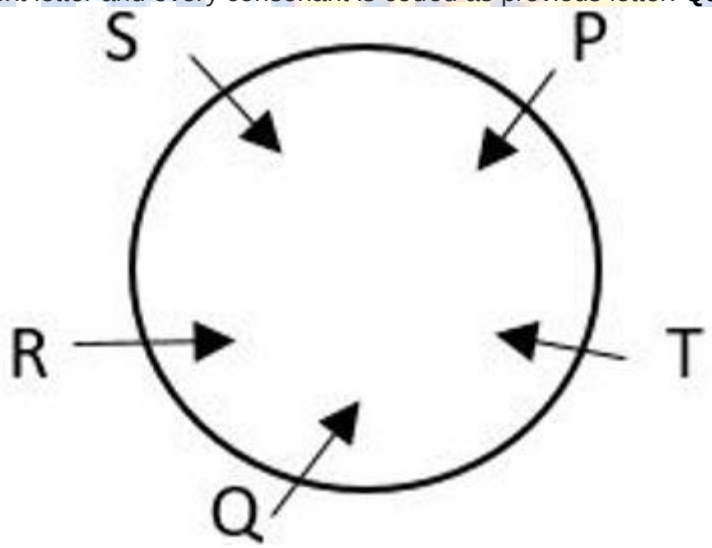
Question no. 38 Answer Option B

FROZEN - EQPYFM

DENIED - CFMJFC

JUMBLE - IVLAKF

Every vowel is coded as next letter and every consonant is coded as previous letter. **Question no. 39**



Answer Option A

Question no. 40 Answer Option B

No paper is a kite (E) + some kites are sticks (I) = Some sticks are not papers (O*). Hence, Conclusion I will not follow but conclusion II will follow.

All strings are kites (A) + No kite is an paper (E) = No string is an paper (E) $\Rightarrow$ I.I $\Rightarrow$ Some strings are not papers (O).Hence, Conclusion III will follow.

No paper is a kite (E) + Some kites are clouds (I) = Some clouds are not papers (O*). Hence, Conclusion IV will not follow.

Question no. 41 Answer Option D

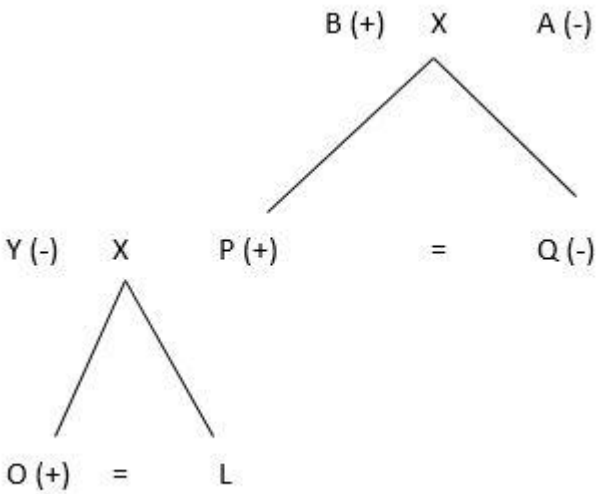
None of the assumptions is implied.

Question no. 42 Answer Option D

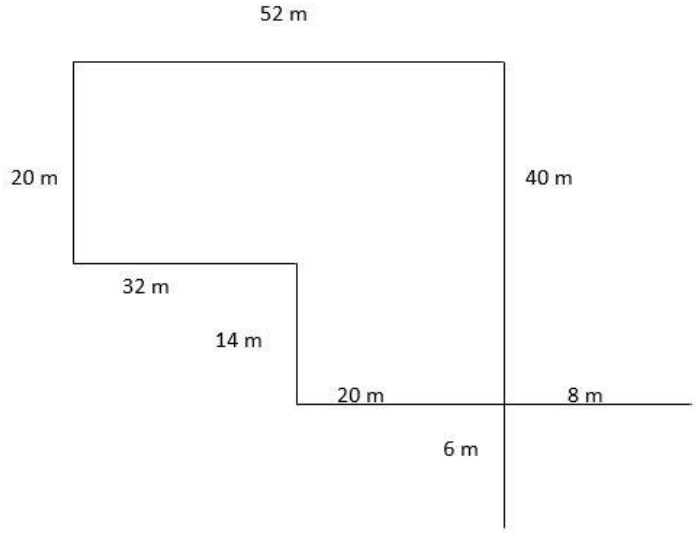
Statement says that the new fiscal year was begun by big Automobile companies with posting of high growth in domestic vehicle sale.

Nothing has been said about the new launches in the statement, so I is not implicit. Also, nothing has been said in the statement about the increase or decrease in the production capacity. Thus, II also isn't implicit.

Question no. 43 Answer Option B



Question no. 44 Answer Option A



Shortest distance = $\sqrt{6^2 + 8^2} = \sqrt{36 + 64} = \sqrt{100}$ = 10 m, north east

Question no. 45 Answer Option B

Shirt and Sweater are entirely different. But, both are parts of clothes.

Question no. 46 Answer Option B

Question no. 47 Answer Option B

In each one of the other figures, the small line segment lies one space ahead of the dot, in a CW direction.

Question no. 48 Answer Option B

Question no. 49 Answer Option D

Question no. 50 Answer Option D

Question no. 51 Answer Option D

Question no. 52 Answer Option C

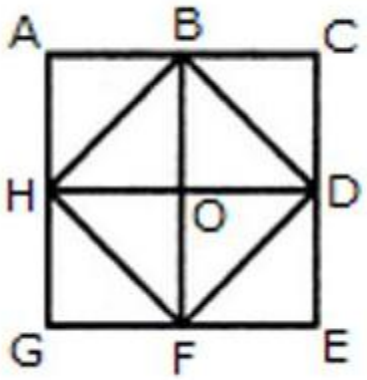
Question no. 53 Answer Option A

Question no. 54 Answer Option C

Question no. 55 Answer Option B

A convex pentagon has no angles pointing inwards. More precisely, no internal angles can be more than 180°.

The figure may be labelled as shown.



The pentagons in the figure, are ABDFH, CDFHB, EFHBD, GHBDF, ACDFG, CEFHA, EGHBC, GABDE, BDEGH, DFGAB, FHACD and HBCEF. Clearly, these are 12 in number.

Question no. 56 Answer Option A

The 9th meeting of India-ROK Joint Commission (ROK/ South Korea) was held during the South Korean Foreign Minister Kang Kyung - wha's official two - day visit from December 18 -19 in New Delhi. They reviewed the progress in multifaceted cooperation under the Special Strategic Partnership between the two countries, including follow-up action on decisions taken during the visit of ROK President Moon Jae-in to India in July 2018, and will explore new areas of cooperation,"

Question no. 57 Answer Option C

Punjab Legislative Assembly has unanimously passed a resolution for seeking 30% reservation for women in Parliament and State legislative assembly.

Question no. 58 Answer Option D

Former economic affairs secretary Shaktikanta Das was named the 25th governor of the Reserve Bank of Inida(RBI) to succeed Urjit Patel, who quit abruptly amid a bitter dispute over the regulator's autonomy.

Question no. 59 Answer Option B

Question no. 60 Answer Option C

A CEC of the Election Commission can have a tenure of six years or hold office till the age of 65 years, whichever is earlier. The convention is to appoint the senior-most election commissioner as chief election commissioner. Present Chief Election Commission is Sunil Arora.

Question no. 61 Answer Option B

Akbar started an Ibadat Khana or a house of translation works in Fatehpur Sikri. He assigned the work to a few officials to translate the Sanskrit books Rajatarangini, Ramayana and Mahabharata into the Persian language. To gain access to the literature of the non-Persian speaking world, Akbar's scholars translated works from Latin, Hindi, Sanskrit and Greek into Persian. One among them is the Hindu epic Mahabharata, which was translated into a Persian book called Razmnama (Book of Wars).

Question no. 62 Answer Option C

Question no. 63 Answer Option B

Renowned English fiction writer Amitav Ghosh has been selected for Jnanpith award, 2018. The Circle of Reason (1986) was his first novel. Jnanpith award was instituted in 1961. Under this who write in one of the 22 Indian languages listed in the Schedule Eight of the Indian Constitution are eligible for this award. The winners receive a cash prize, a citation and a bronze replica of Goddess Saraswati. Famou Malyalam writer G.S. Kurup was first winner of Jnanpith award.

Question no. 64 Answer Option A

The Manas River is a transboundary river in the Himalayan foothills between southern Bhutan and India. The total length of the river is 376 kilometres (234 mi), flows through Bhutan for 272 kilometres (169 mi) and then through Assam for 104 kilometres (65 mi) before it joins the mighty Brahmaputra river at Jogighopa. Another major tributary of the Manas, the Aie river joins it in Assam at Bangpari.

Question no. 65 Answer Option C

Good Governance Day is observed annually on December 25th, the birth anniversary of former Prime Minister Atal Bihari Vajpayee. Good Governance Day was established in 2014 to honor Mr Vajpayee by fostering awareness among the people of accountability in government.

Question no. 66 Answer Option D

Sonam Kapoor Is PETA India's 2018 Person of the Year. For singing the praises of vegan eating, keeping animal skins out of her handbag line for Rheson, and taking many other actions for animals, actor Sonam Kapoor has been named PETA India's Person of the Year for 2018.

Question no. 67 Answer Option A

The Prime Meridian (Longitude = 0°) passes through the following countries: United Kingdom, France, Spain, Algeria, Mali, Burkina Faso, Togo, Ghana, Antarctica.

Question no. 68 Answer Option D

Catriona Elisa Gray from the Philippines was crowned as the Miss Universe 2018, beating 93 contestants from other countries. She was crowned by Demi Leigh Nel-Peters from South Africa, the Miss Universe 2017 title winner.

Question no. 69 Answer Option B

Each kho-kho team consists of 12 players, but during a contest only 9 players from each team take the field. A match consists of two innings. In an innings, each team gets seven minutes for chasing and seven for defending.

Question no. 70 Answer Option B

Wankhede Stadium was built in approx. six months and opened in time for the final Test between India and the West Indies in 1975. It was built by Mumbai Cricket Association (MCA) in South Mumbai near the Churchgate station.

Question no. 71 Answer Option D

Tonometer - is used to measure the pitch of a sound.

Vernier calliper - is used to measure the length of rod, length & diameter of a wire.

Transponder - is used to receive a signal and transmit a reply immediately.

Question no. 72 Answer Option C

The atomic number of an element is equal to the number of protons in the nucleus. An atom contains three main types of particles: protons, neutrons and electrons. An element is the purest form of a substance. When divided, it results in a large number of identical atoms—assuming no isotopes are there.

Question no. 73 Answer Option A

The components of insulin aspart are as follows: Metal ion – zinc (19.6 µg/mL) Buffer – disodium hydrogen phosphate dihydrate (1.25 mg/mL) Preservatives – 3-methylphenol (m-cresol) (1.72 mg/mL) and phenol (1.50 mg/mL)

Question no. 74 Answer Option C

Parathyroid hormone serves to increase blood concentrations of calcium. Mechanistically, parathyroid hormone preserves blood calcium by several major effects: Stimulates production of the biologically-active form of vitamin D within the kidney. Facilitates mobilization of calcium and phosphate from bone.

Question no. 75 Answer Option D

Water gas is a mixture of carbon monoxide and hydrogen (not water). It is produced when steam is passed over red-hot coke (carbon). Water gas is so named because water (steam) is the usual source for its production.Both CO and H2 are inflammable gases, and so water gas is used as a fuel.

Question no. 76 Answer Option A

Sodium bicarbonate is used in the preparation of baking powder which is used in baking industries. Baking powder helps to make bread and cakes soft and sponge. When baking powder is heated carbon dioxide gas is released which makes the cakes and breads fluffy.

Question no. 77 Answer Option B

Chloroform decomposes slowly under the influence of light and air. It also decomposes on contact with hot surfaces, flames or fire, forming irritating and toxic fumes which consist of hydrogen chloride, phosgene and chlorine.

Question no. 78 Answer Option D

Potassium carbonate (molecular formula: K_2CO_3), also known as potash or pearl ash, appears as a white powder or as colorless solid crystal with salty taste and deliquescence.

Question no. 79 Answer Option D

Urea was the first organic compound to be prepared in the laboratory, which was by synthesised chance. It was prepared by Friedrich Wohler, a German chemist in the year 1828. Wohler synthesised urea from an inorganic compound, ammonium cyanate.

Question no. 80 Answer Option C

If a Sitar and a Flute play notes of the same pitch and loudness, the sounds will still be quite distinct. This is because musical instruments do not vibrate at a single frequency: a given note involves vibrations at many different frequencies, often called harmonics, partials, or overtones.

Question no. 81 Answer Option B

Carbon is responsible for making highest number of compounds. Being tetravalent in nature it has the capability of having 4 other elements to get attached.

Question no. 82 Answer Option B

Saliva contains the enzyme amylase, also called ptyalin, which is capable of breaking down starch into simpler sugars such as maltose and dextrin that can be further broken down in the small intestine. About 30% starch digestion takes place in the mouth cavity.

Question no. 83 Answer Option A

Photoreceptor nerve cells in the eyes that are sensitive to low light levels and are present in the retina, but outside the macula.

Macula: The portion of the eye at the center of the retina that processes sharp, clear straight-ahead vision.

Sclera: The tough outer coat that protects the entire eyeball.

Choroid: Layer of the eye behind the retina, contains blood vessels that nourish the retina.

Question no. 84 Answer Option D

Hydrogen fuel is known as "fuel of future". Hydrogen fuel is a zero - emission fuel when burned with oxygen. Since hydrogen gas is so light, it rises in the atmosphere and is therefore rarely found in its pure form, H_2. In a flame of pure hydrogen gas, burning in air, the hydrogen (H_2) reacts with oxygen (O_2) to form water (H_2O) and releases energy.

Question no. 85 Answer Option B

Sodium-vapour lamp, electric discharge lamp using ionized sodium, used for street lighting and other illumination. A low-pressure sodium-vapour (LPS) lamp contains an inner discharge tube made of borosilicate glass that is fitted with metal electrodes and filled with neon and argon gas and a little metallic sodium. When current passes between the electrodes, it ionizes the neon and argon, giving a red glow until the hot gas vaporizes the sodium. The vapourized sodium ionizes and shines a nearly monochrome yellow.

Question no. 86 Answer Option C

Decibel is a logarithmic unit used to measure the sound intensity.

Question no. 87 Answer Option C

O- type blood group is called as the universal donor because type O negative blood is compatible to any blood recipient's type. O- bloodtype doesn't have antigen for A or B and Rh antigen on the surface of its RBCs. O+ blood group is not the universal donor.

Question no. 88 Answer Option B

Suckling by the baby stimulates the paraventricular nuclei and supraoptic nucleus in the hypothalamus, which signals to the posterior pituitary gland to produce oxytocin. Oxytocin stimulates contraction of the myoepithelial cells surrounding the alveoli, which already hold milk.

Question no. 89 Answer Option D

Panangipalli Venugopal is an Indian Cardiovascular surgeon and hospital administrator from Rajahmundry, Andhra Pradesh, India who is widely regarded as a pioneer in cardiac surgery. The Government of India honored him, in 1998, with the Padma Bhushan, the third highest civilian award, for his services to the field of Medicine. The Organ Transplant Bill 1994 was passed in the Indian Parliament in May 1994 which legalized the organ transplants in India. The Bill was on the Table of the President of India for final approval when Venugopal led a team of doctors to perform the first successful heart transplant in India on 3 August 1994. This was the first of the 26 heart transplant procedures performed by Venugopal.

Question no. 90 Answer Option A

Water has the highest density at a temperature of 4 degree Celcius , so at this temperature a certain amount of mass of water will occupy the smallest volume.

Question no. 91 Answer Option C

In a eukaryotic cell, the cell's DNA which has been inherited from both the parents is stored inside the nucleus of the cell in a highly coiled and condensed form. This DNA which is responsible for controlling pretty much all the protein production and gene expression of the body is found nowhere else.

Apart form this inherited DNA, the cell organelles such as mitochondria and chloroplasts(in plant cell only, not in animal cells), which are present in the cytoplasm of the cell have their own DNA.

Question no. 92 Answer Option B

A lens is made of flint glass (refractive index=1.5). When the lens is immersed in a liquid of refractive index 1.25, the focal length increrases by a factor of 1.25.

Question no. 93 Answer Option B

In 1827, French engineer Benoit Fourneyron developed a turbine capable of producing around 6 horsepower – the earliest version of the Fourneyron reaction turbine.

Question no. 94 Answer Option B

A body at 0 degree Centigrade radiates heat. Any body with temperature above absolute zero i.e. 0 K will emit and absorb thermal radiation.

Question no. 95 Answer Option B

A red light appears red because it reflects wavelengths most strongly in the red part of the spectrum (about 650-700 nm). Other shorter wavelengths are absorbed by it. By shining a green light, you are using a filter to remove wavelengths of light that are not green. The filter works by reflecting non-green wavelengths, and allowing only green wavelengths to pass through.

As a consequence, the only light to reach the red light is green wavelengths, which are absorbed and not reflected by the red light. The result is that little light is actually reflected, creating our perception of the light as black.

Question no. 96 Answer Option A

There are two hydrogen bond donors (H) and two hydrogen bond acceptors in oxygen lone pairs. This means that any individual water molecule is involved in four hydrogen bonds.

Question no. 97 Answer Option C

Fluorine is the most electronegative element i.e. 3.98, while francium is one of the least electronegative. (Helium, neon, and argon are not listed in the Paulingelectronegativity scale, although in the Allred-Rochow scale, helium has the highest electronegativity.)

Question no. 98 Answer Option B

Dialysis is the process which is used for the separation of crystalloids from a colloid by filtration or diffusion through parchment paper or animal membrane.The apparatus employed for this purpose is called dialyser.

Question no. 99 Answer Option A

Entamoeba histolytica is an invasive, pathogenic protozoan, causing amoebiasis, and an important cause of diarrhea. The word 'histolysis' literally means disintegration and dissolution of organic tissues. Mammals such as dogs and cats can become infected transiently, but are not thought to contribute significantly to transmission.

Question no. 100 Answer Option B

The largest artery is the aorta, the main high-pressure pipeline connected to the heart's left ventricle. The aorta branches into a network of smaller arteries that extend throughout the body. The arteries' smaller branches are called arterioles and capillaries.